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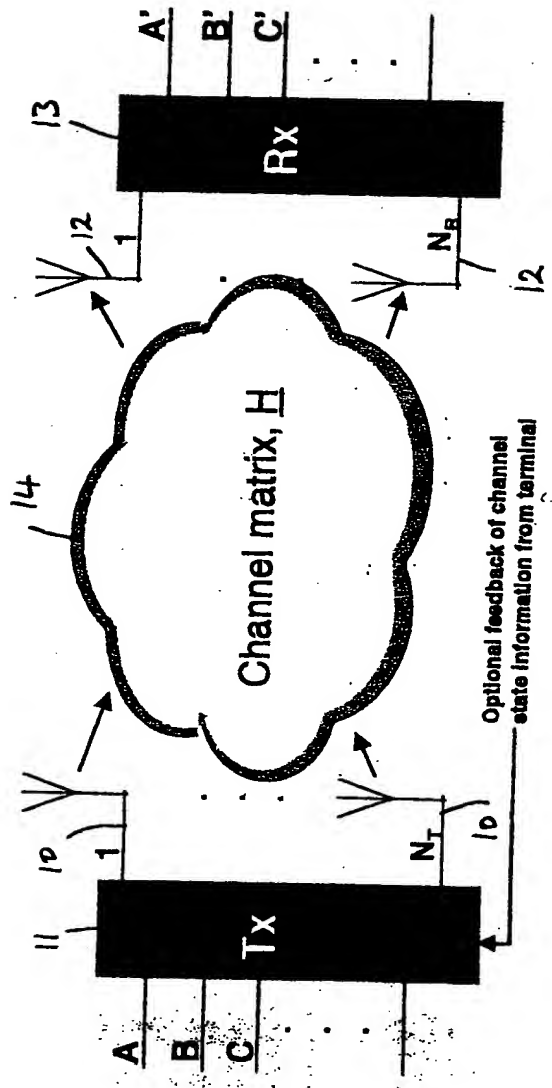
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Prior ART

FIGURE 1

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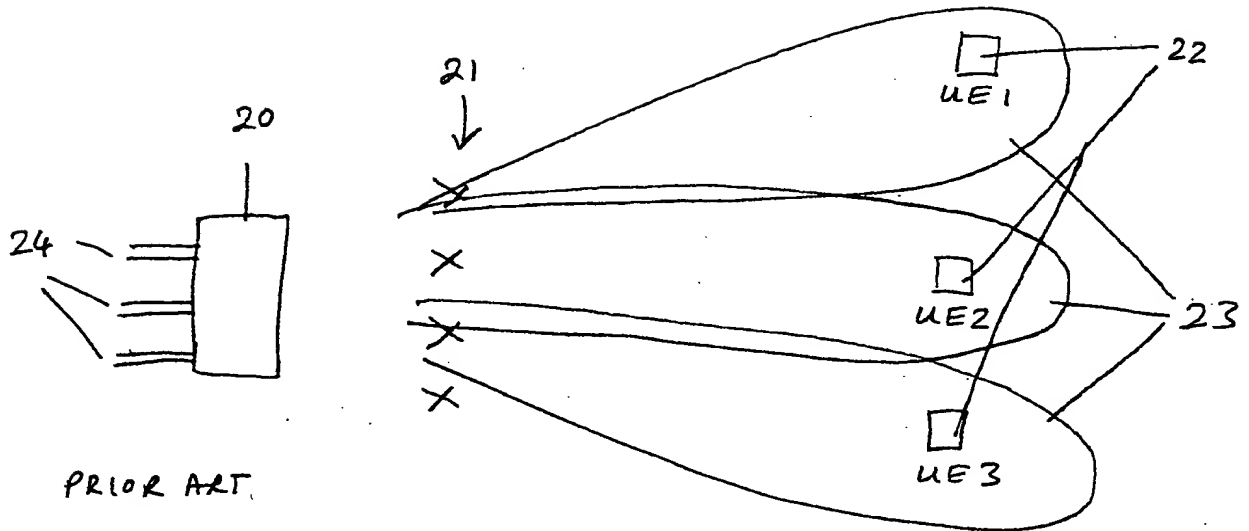


FIGURE 2

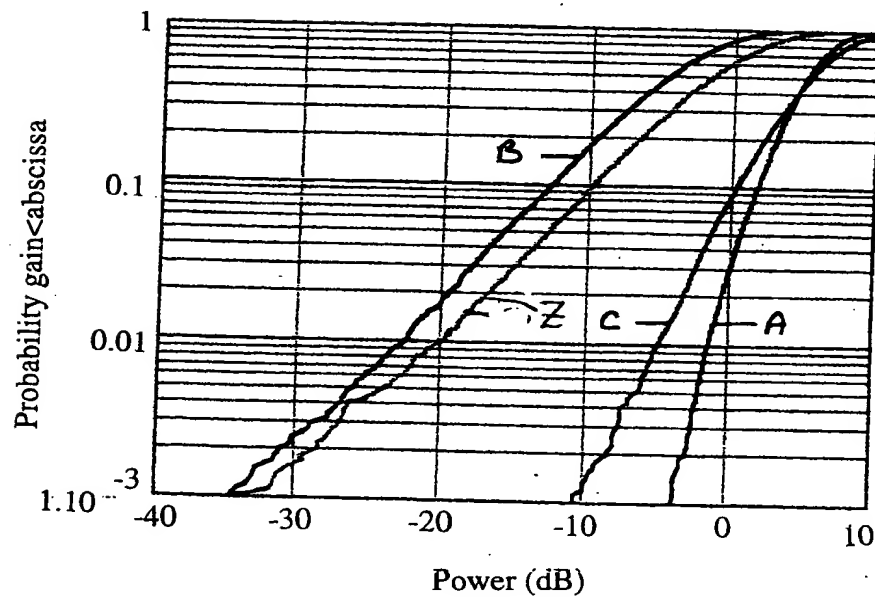
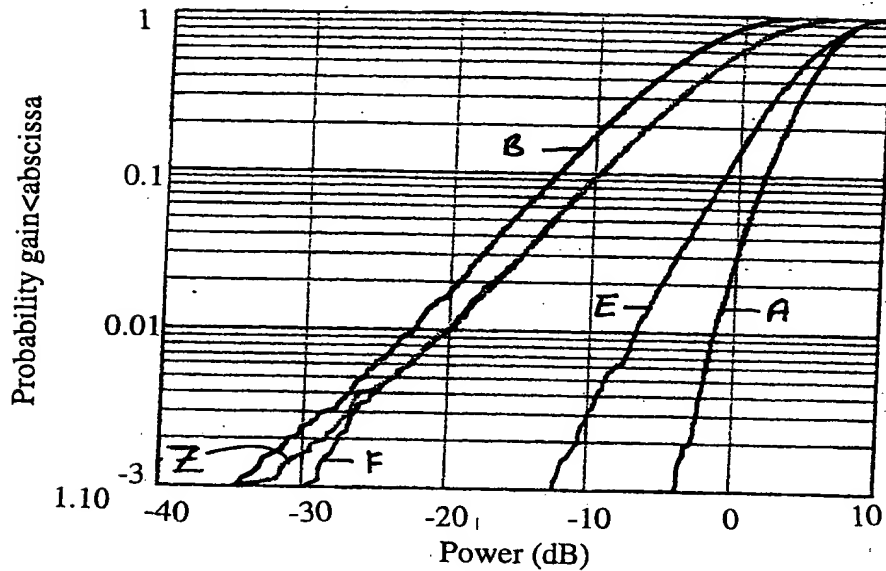


Figure 3

- A Max channel, no correlation
- B Min channel, no correlation
- C Max channel, complete correlation
- D Min channel, complete correlation (not present)
- Z Baseline 1:1

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- A Max channel, polarisation diversity, full polarisation conversion
- B Min channel, polarisation diversity, full polarisation conversion
- E Max channel, pol'n diversity, no polarisation conversion
- F Min channel, pol'n diversity, no polarisation conversion
- Z Baseline 1:1

Figure 4

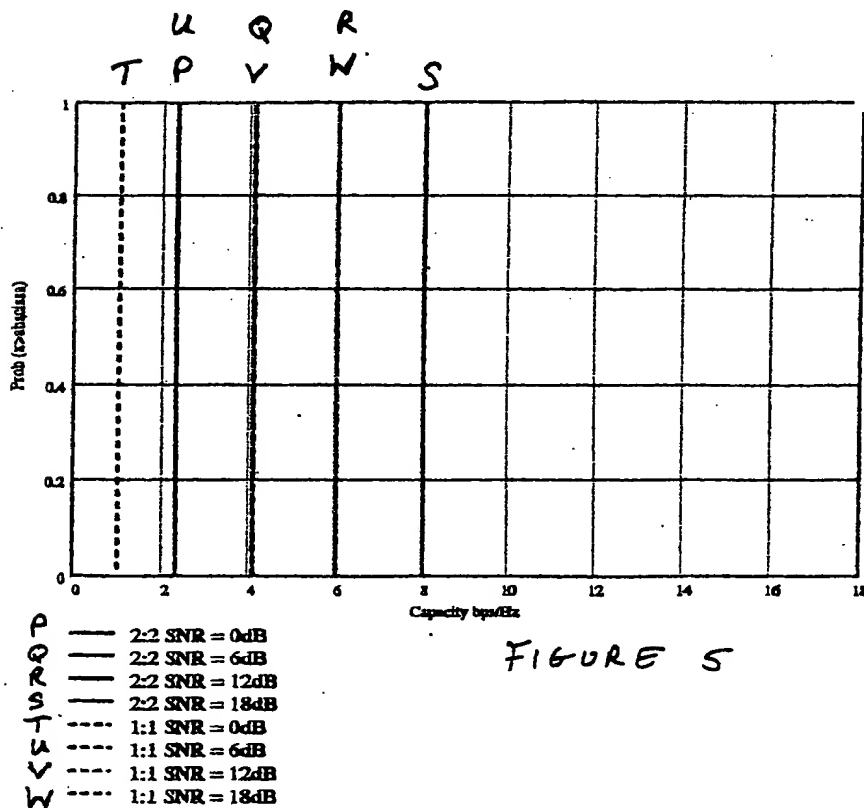


FIGURE 5

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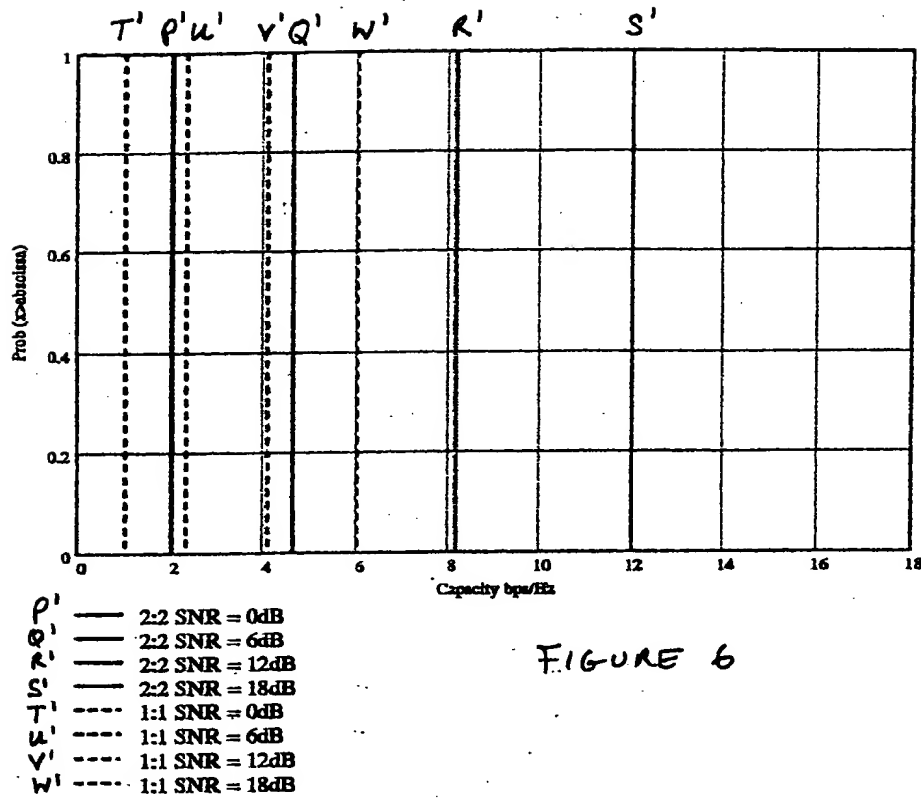


FIGURE 6

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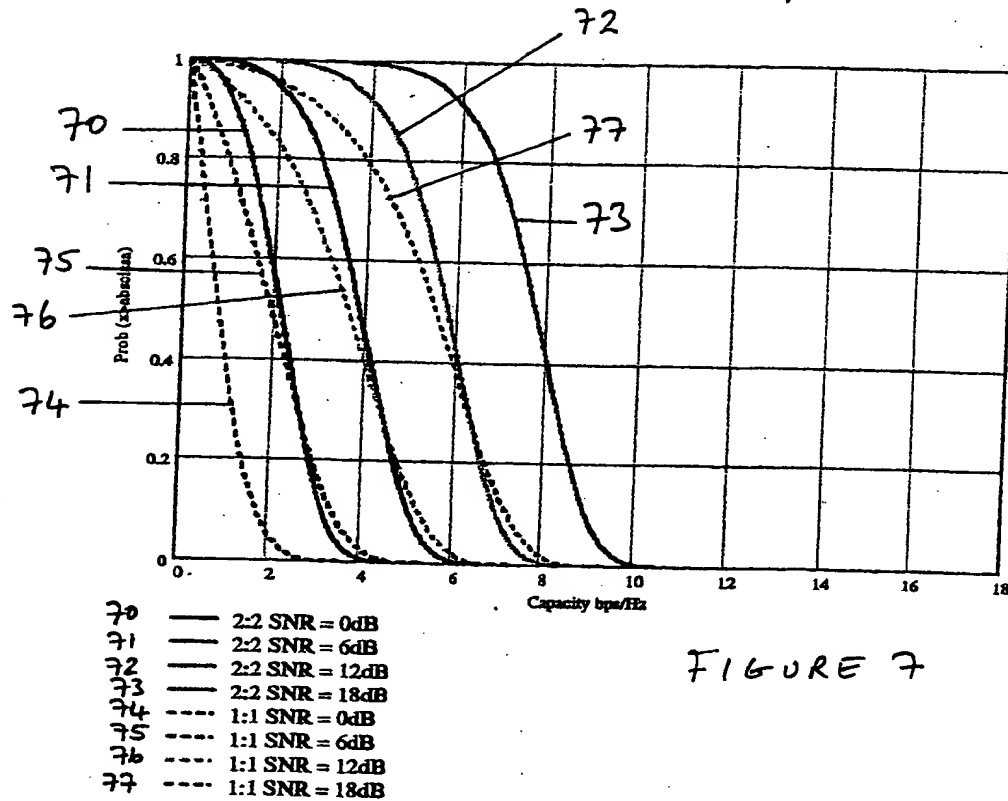


FIGURE 7

Figure 7 - Capacity for 2:2 space diversity MIMO system with the basestation antennas (transmitter) completely correlated and the mobile completely uncorrelated.

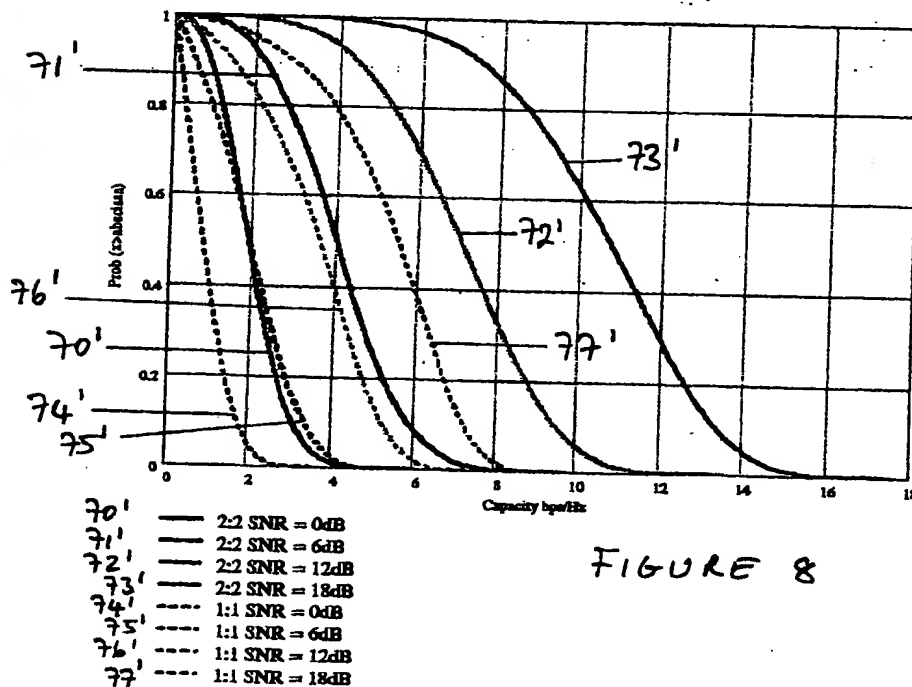


FIGURE 8

Figure 8 - Capacity for 2:2 polarisation diversity MIMO with no polarisation conversion in the environment

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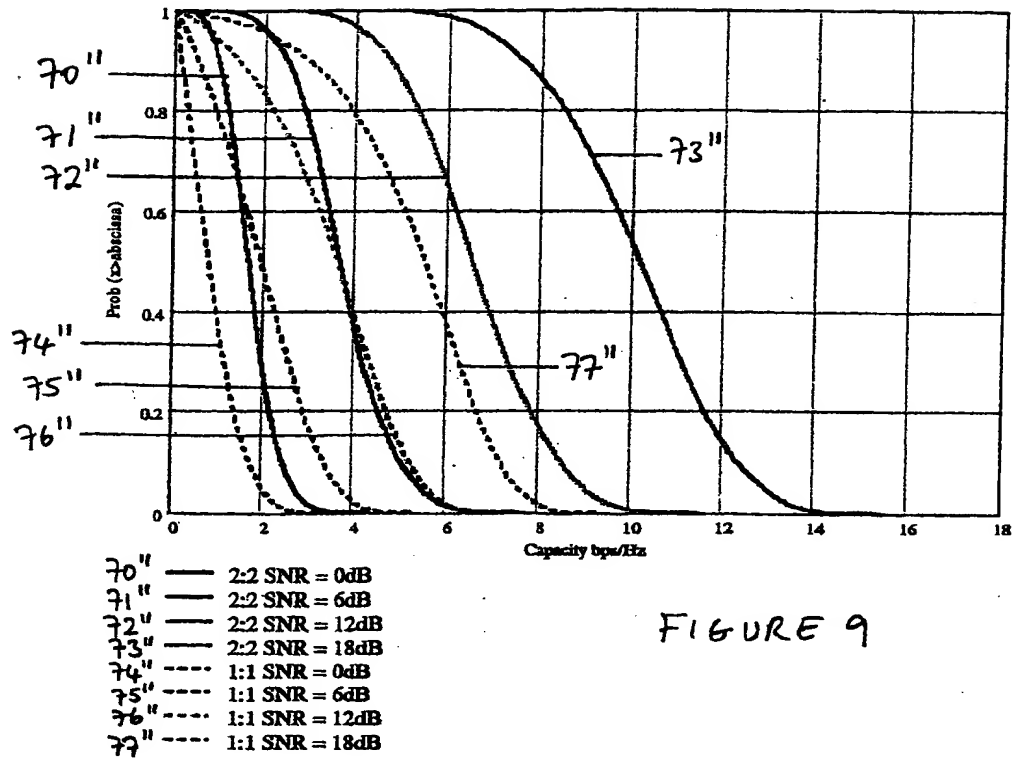


FIGURE 9

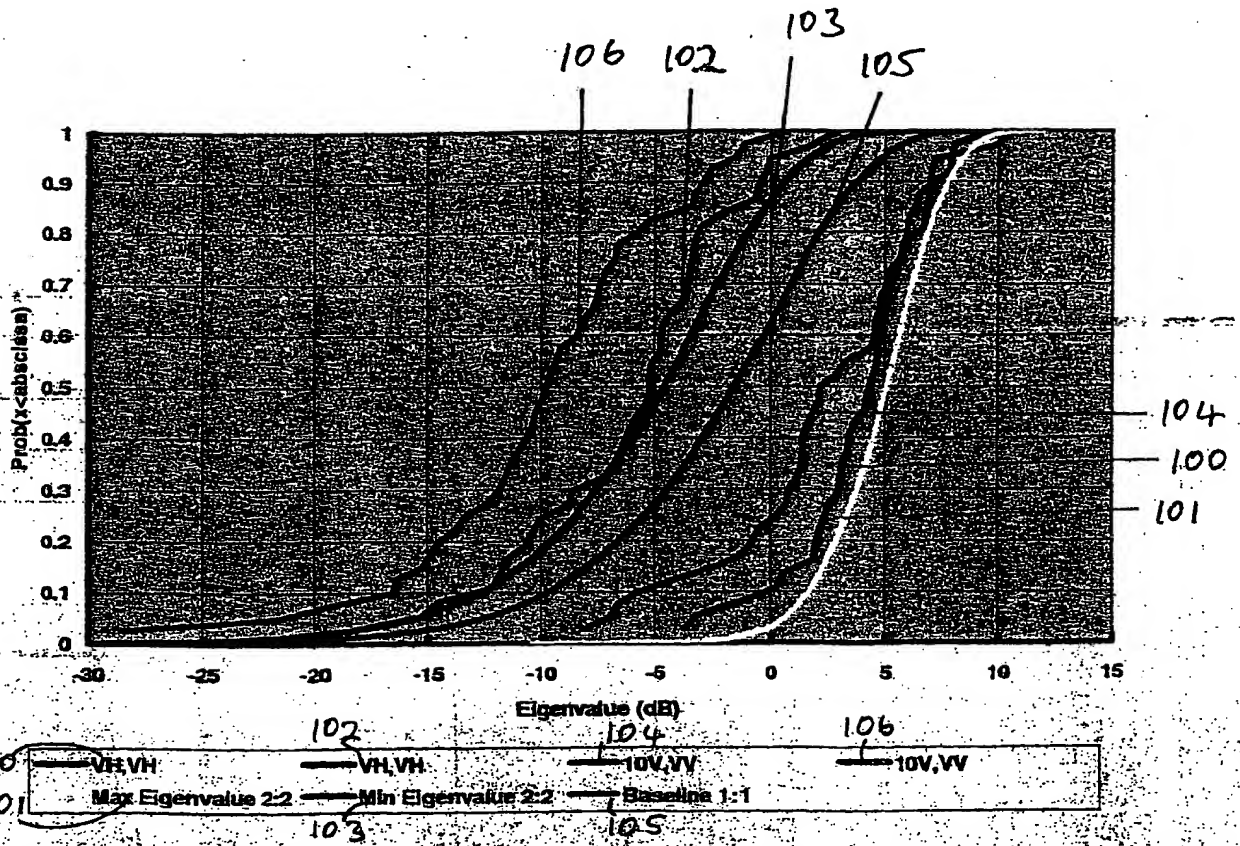


Figure 0-10 - Measured distributions for the power gains for the orthogonal MIMO paths for 2:2 space and polarisation diversity configurations.

FIGURE 10.

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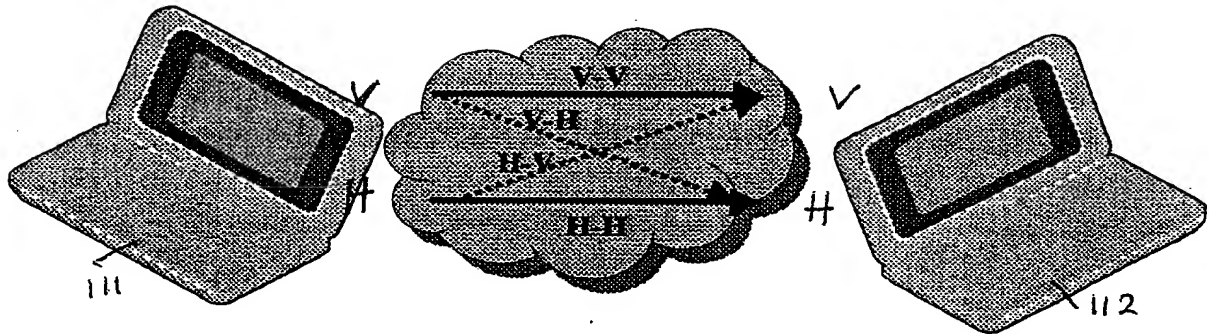


FIGURE 11

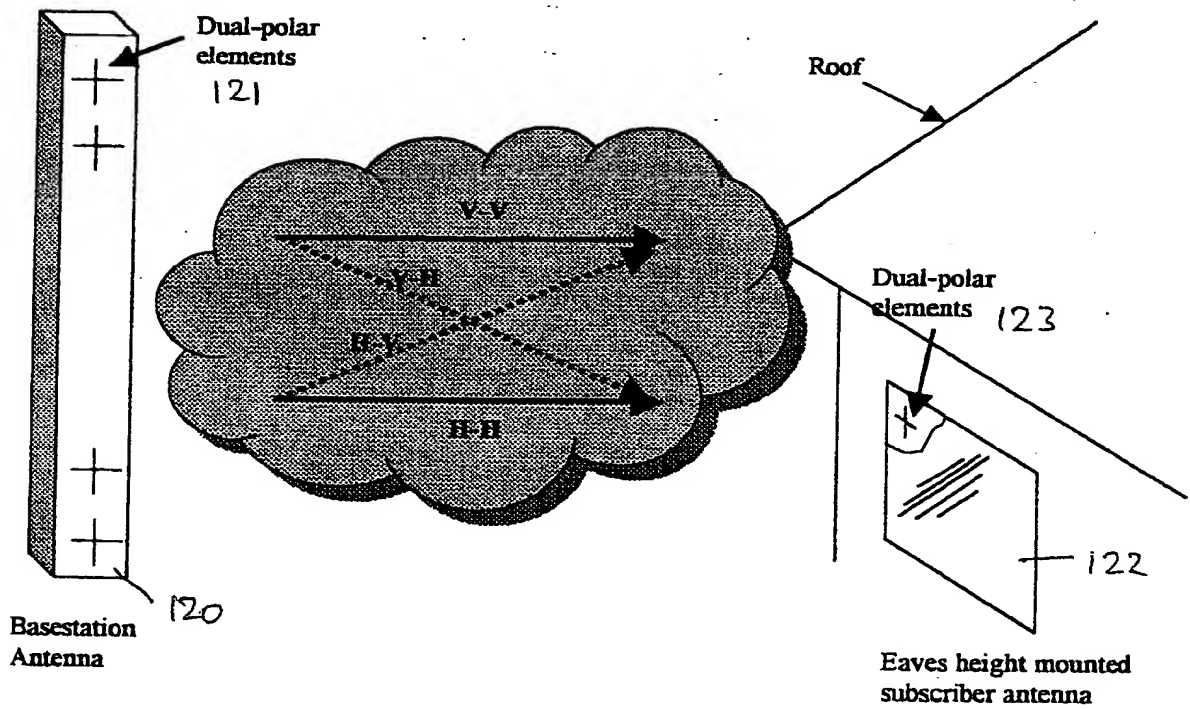


FIGURE 12



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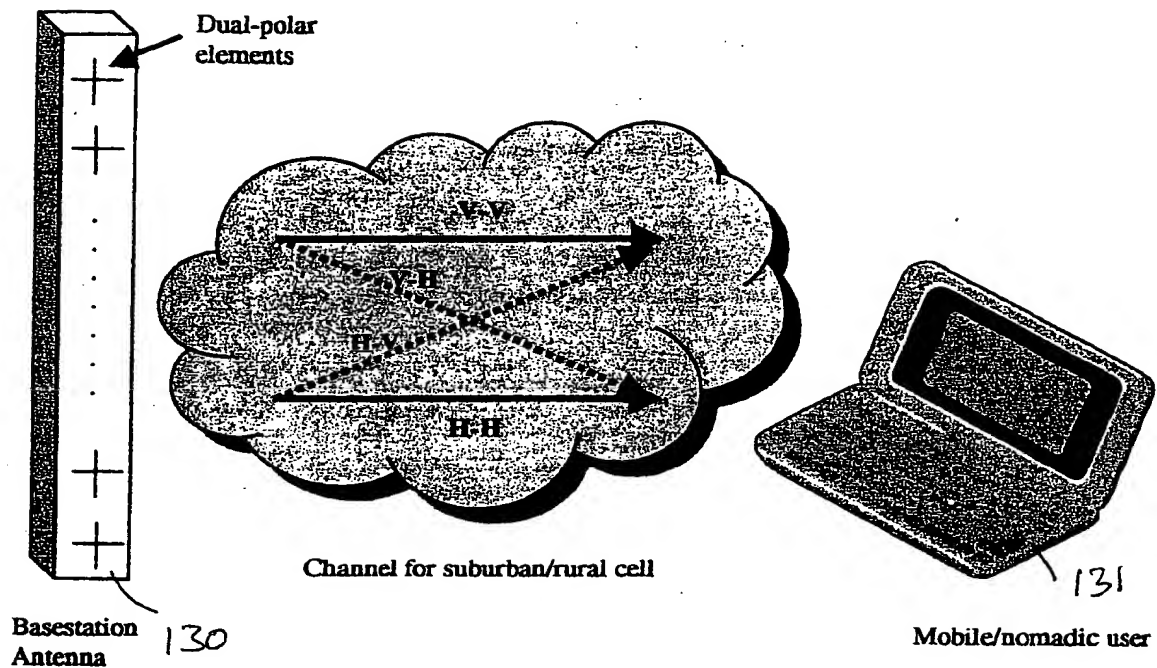


FIGURE 13

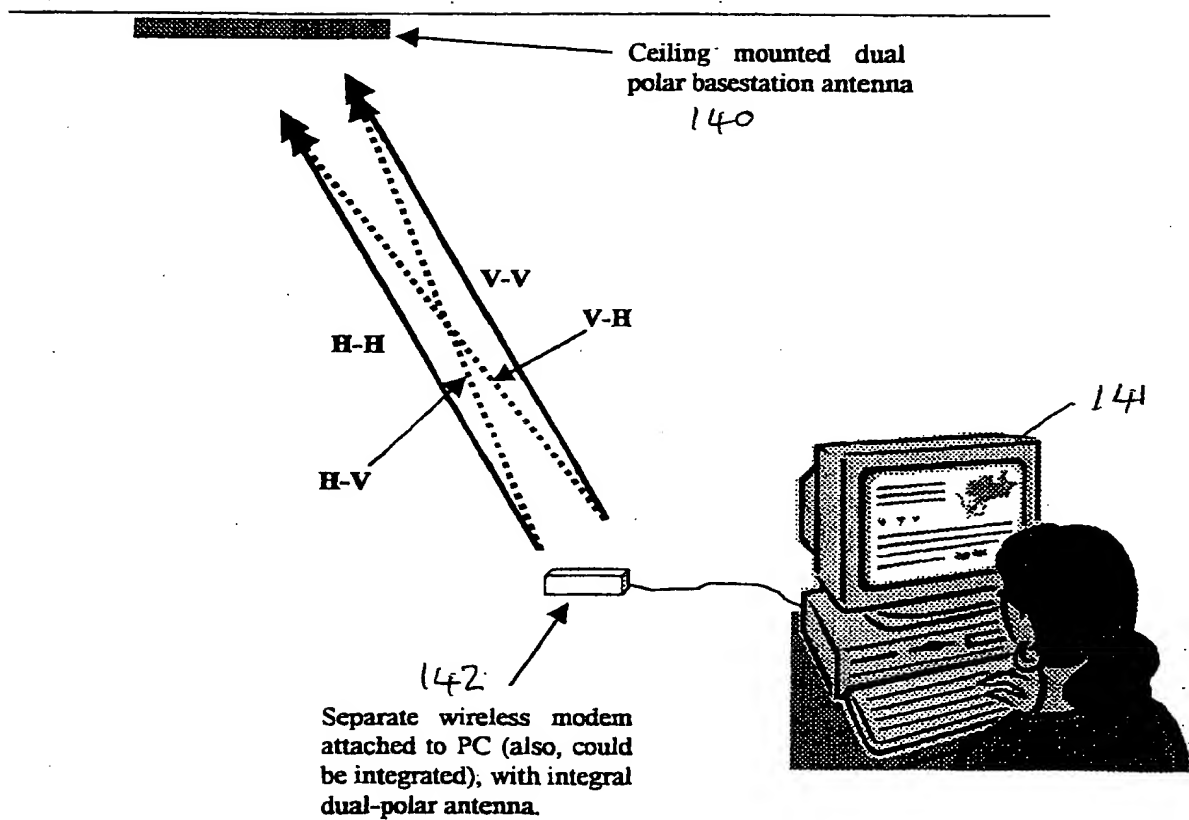


FIGURE 14.

FIGURE 16

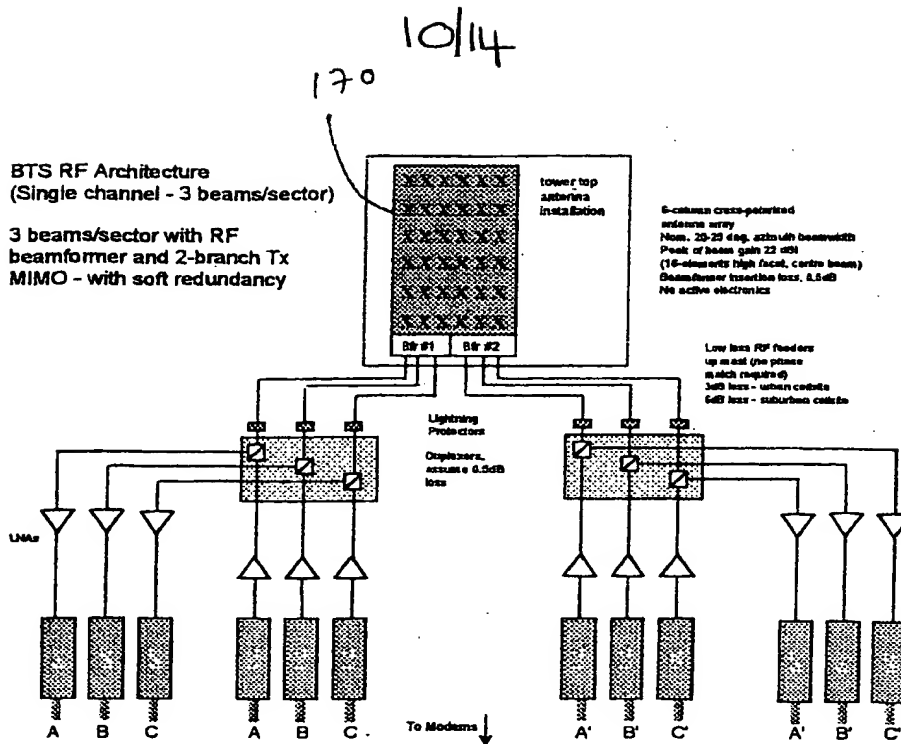


FIGURE 17

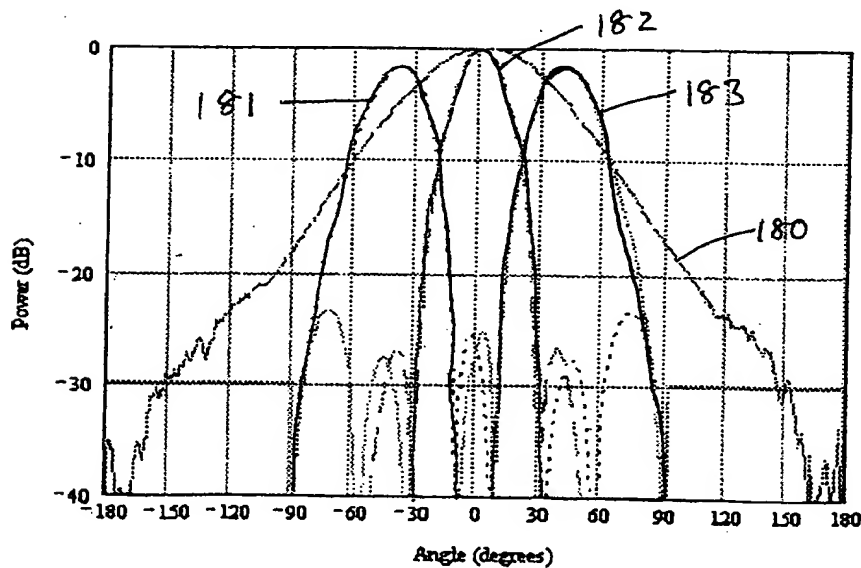
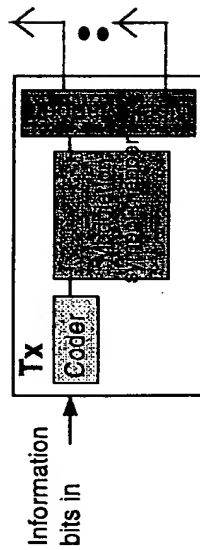
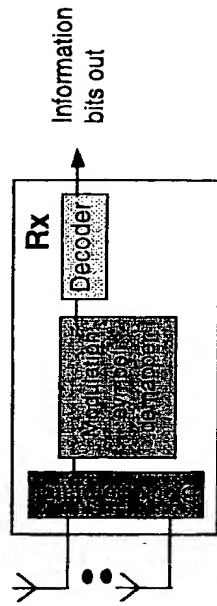
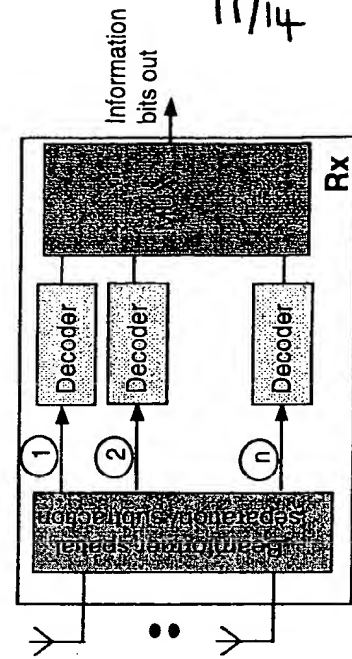
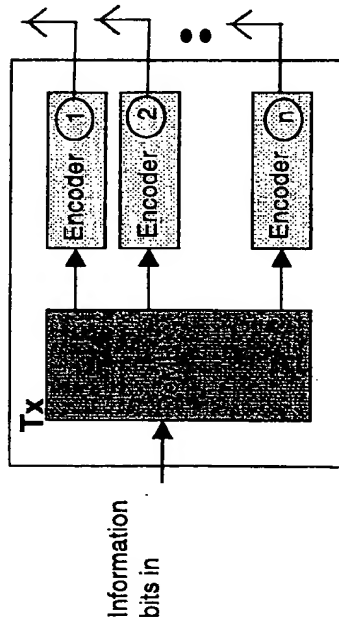


FIGURE 18.

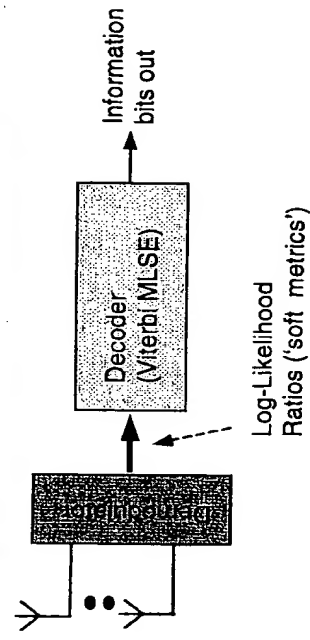
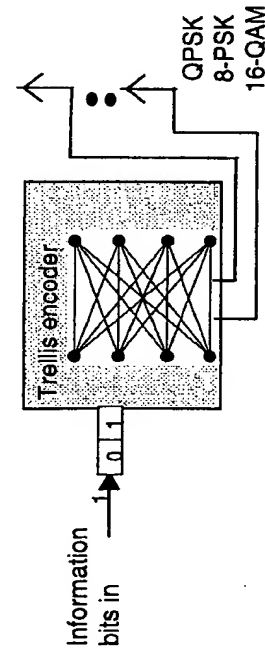
# Basic Space-Time Coding Techniques



**Space-Time Block Coding (STBC)**  
 • defined for 3G



**Layered Space-Time Coding (BLAST)**  
 • more applicable to fixed/nomadic



**Space-Time Trellis Coding (STTC)**  
 • suitable for both mobile and fixed

Figure 19

# Feedback STC - Separated Subchannels

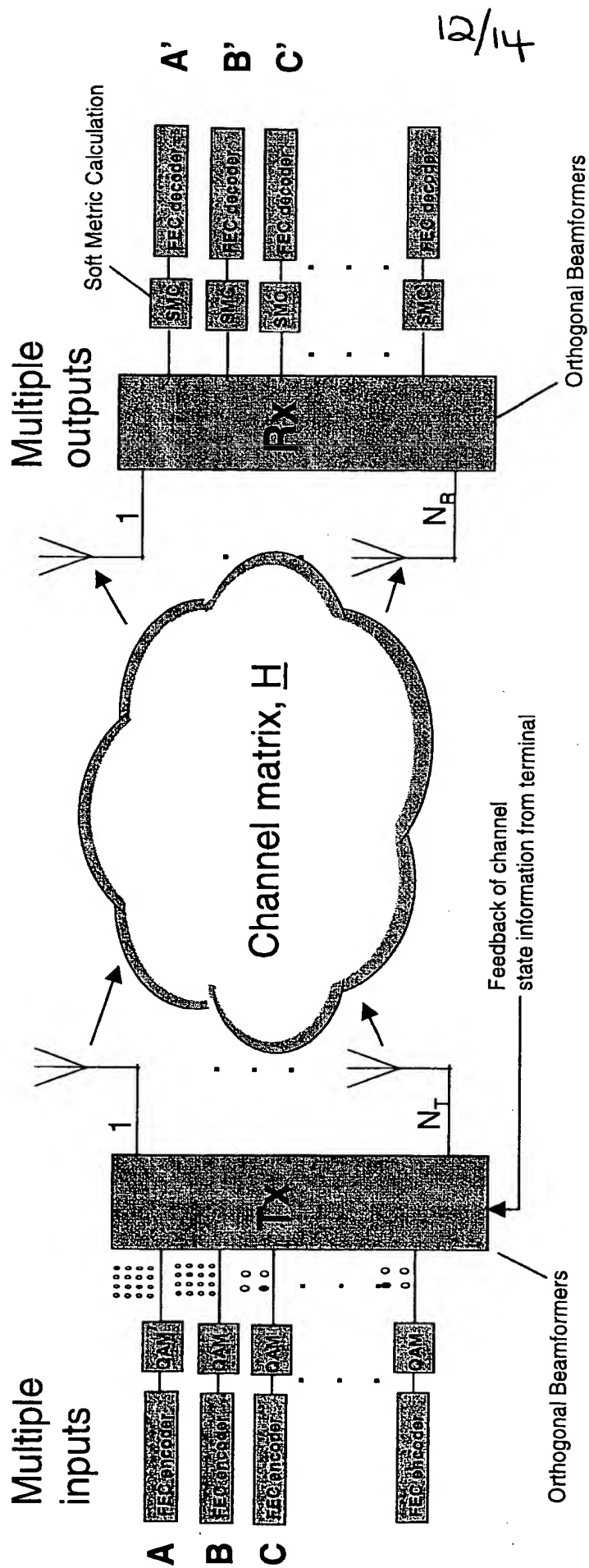


Figure 20

# Spatial Multiplexing STC

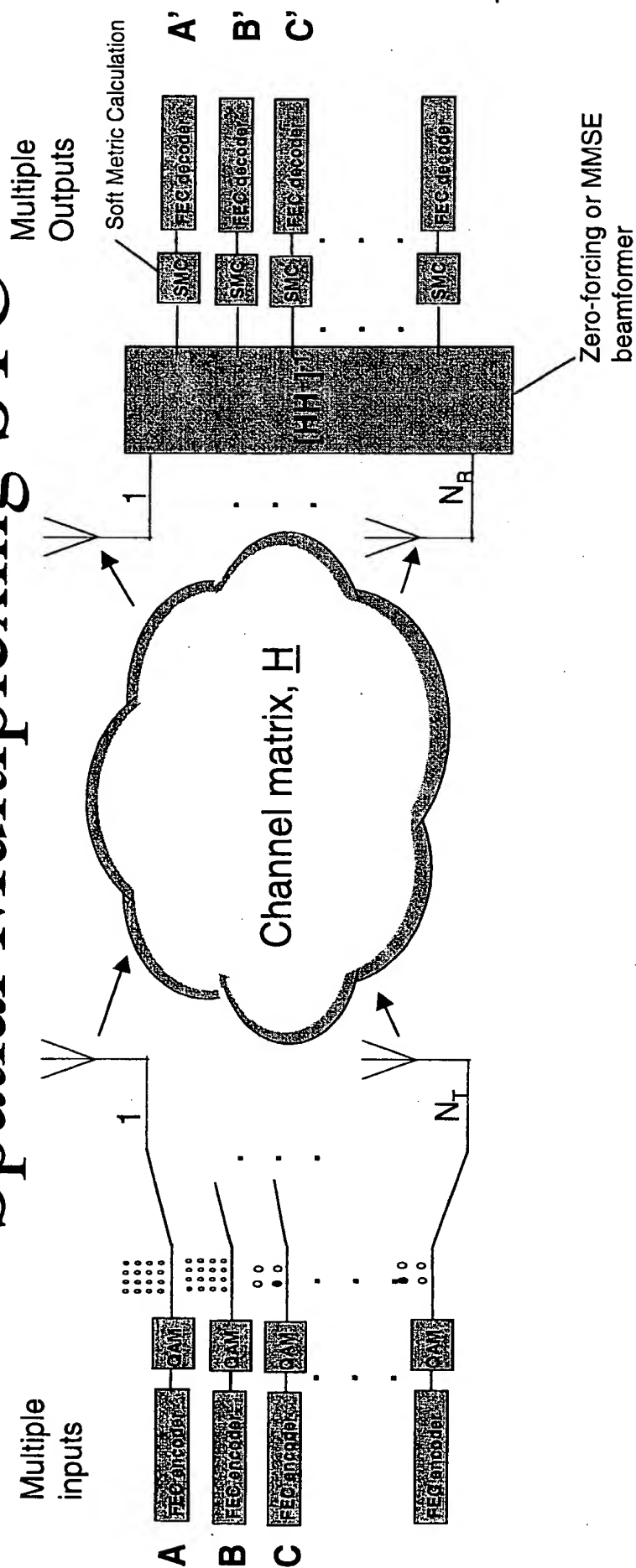


Figure 21

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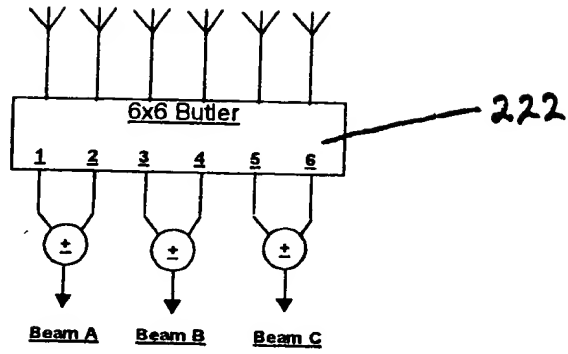


FIGURE 22